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April 22, 2008

Ref: EPR-N

Sarah Bucklin
Project Manager
Bureau of Land Management
Casper Field Office
2987 Prospector Drive
Casper, WY 82604

Subject: Draft Environmental Impact Statement for West Antelope II Coal Lease Application [CEQ# 20080038]

Dear Ms. Bucklin:

The U.S. Environmental Protection Agency (EPA) has reviewed the Bureau of Land Management's (BLM) Draft Environmental Impact Statement (DEIS) for West Antelope II Coal Lease Application to assess the consequences of issuing a lease for a 4109-acre tract of federally-owned solid minerals making available 430 million tons of surface-minable coal in the Powder River Basin of Wyoming. Our review and comments are provided pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(c) and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609.

Air quality continues to be EPA's main concern for the energy activities in the Powder River Basin (PRB). Large surface coal mines have the potential to become particulate emission sources in the PRB contributing to air quality degradation. Although the Wyoming Department of Environmental Quality (WDEQ) has by statute, the authority and responsibility to require mitigation for air quality impacts, the FEIS should propose additional mitigation measures for air quality impacts that may go beyond BLM's jurisdiction for managing this solid mineral lease. (See CEQ Forty Questions: #19b). Recent air quality monitoring has shown exceedances of the PM_{10} (particulate matter less than 10 micrometers in diameter, commonly referred to as fugitive dust) air standard.

Air quality models also predict additional increases in PM_{10} emissions for this mining area, potentially causing exceedances of the air quality standards. Therefore, we are recommending that the FEIS analyze more effective dust control measures than the current BACT and BACM practices and develop additional mitigation to reduce fugitive dust from mining the lease tract and the cumulative effects of mining in the surrounding area.

EPA also has concerns about the impacts of nitrogen dioxide emissions from cast blasting shots and whether or not existing mitigation is sufficient. Voluntary blasting restrictions to control public exposure to NOx emissions may not be reasonable mitigation depending on the proximity of public exposure to the explosive fumes. The most successful control measure would be to eliminate cast blasting entirely as the Eagle Butte Mine has done.

EPA is also concerned about wildlife impacts to raptors, sage grouse and the long-term success of coal mine reclamation to replace destroyed wetlands in the basin.

Based on the procedures EPA uses to evaluate the potential effects of the examined alternatives and the adequacy of the information in the DEIS, the proposed action will be listed in the Federal Register in the category EC-2 (EC - Environmental Concerns, 2 - Adequate Information). This rating means that the review identified environmental impacts that should be avoided in order to fully protect the environment and the DEIS adequately sets forth the environmental impacts of the preferred alternative from information reasonably available on the project. Tiering your discussion of the cumulative environmental consequences from the information reported in the PRB Coal Review studies has been effective. For that reason, all the reports still in preparation from that series should be completed by the FEIS publication date.

Please see the following detailed comments for our specific environmental and informational concerns. We appreciate your interest in our comments. If you have any further questions, please contact James Hanley of my staff at (303) 312-6725.

Sincerely,

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Larry Svoboda
Director, NEPA Program

In our comments, EPA endeavored to provide new regulatory information that could alter your conclusion. Our review examined your analyses or assumptions for flaws that would undermine the preferred alternative. We tried to point out any technical errors that might mislead the concerned public reader of this document. Most importantly, we have issued most comments to request clarifications that will support your conclusions in the Final Environmental Impact Statement (FEIS).

Air Quality

PM_{10} Fugitive Dust

1. 4.2.3 (Tables 4-10 through 4-11). The tables disclose potential cumulative impacts that BLM modeled in the recent PRB Coal Review. Potential cumulative impacts exceeded significance thresholds in the case of the National Ambient Air Quality Standards (NAAQS) for particulate matter as PM_{10} and some of the increments under the Prevention of Significant Deterioration regulations. Air monitoring stations located near the West Antelope Mine have measured concentrations near the 24-hour PM_{10} NAAQS. In addition, several other PM_{10} stations in the Powder River Basin have also measured PM_{10} above the 24-hour standard. EPA is concerned that both monitoring data and modeling results suggest potentially significant project-specific and cumulative PM_{10} impacts caused by existing or future development. The FEIS should also more fully evaluate mitigation for reducing PM_{10} through future actions tiering from this NEPA analysis such as additional stipulations or conditions of approval for the coal-mining plan of development.

2. Current Monitoring Data exceeds predictions of Wyoming DEQ Permit Model. The theory of PM_{10} control in the Wyoming PRB coal mines is: (1) Wyoming DEQ uses a conservative Fugitive Dust Model to determine coal production levels that will not exceed annual NAAQS at any monitor when required BACM (Best Available Control Methods) is used; and (2) monitoring data is used (in the absence of accurate short term models) to show that at actual production levels, 24-hour PM_{10} NAAQS exceedances do not occur (and confirm compliance with the Annual NAAQS).

   When monitoring does not correspond to the predictive model, this indicates that the assumptions and input to the model need to be reassessed. This is particularly important when we have data documenting exceedances and the model predicts that the mines will comply with the standard. Unfortunately, monitoring data showing exceedances at nearby Black Thunder and North Rochelle mines since 2000 have shown the current air quality control approach to be flawed. Both annual and 24-hour PM_{10} exceedances have occurred. We have listed below some potential causes of the disparity between the air permit model and monitoring data:

   a. The current DEQ Permit model under predicts mine emissions even with implemented BACM.
   b. BACM, while required, was not in place when exceedances occurred.
   c. The background level is higher than that assumed.

d. New, unmodeled sources have been introduced near the monitors showing exceedances.

No matter which of these situations is the actual cause or a combination, either mine emissions or other emissions must be reduced before production at the 36 to 42 mmtpy will comply with PM_{10} standards.

3. 3.4.2.3 (Page 3-35), the Natural Event Action Plan (NEAP) for the mines in the PRB is referenced. The NEAP was developed with cooperation between the Wyoming Department of Environmental Quality (WDEQ) and the PRB coal mines, including West Antelope. The EPA approved the NEAP in January 2007. On 22 May 2007, EPA finalized the Exceptional Event Rule (40CFR50 and 40CFR51) which has many of the same features as the previous policies that preceded it and should be appropriately referenced in this section. The PM_{10} control strategies, including BACM, listed in the NEAP are applicable to the Exceptional Event Rule as Reasonable and Appropriate controls. The controls listed within the NEAP should be viewed as the minimum required. Additional mitigation of PM_{10} should be introduced if PM_{10} exceedances occur at the Antelope mine.

4. 3.4.1.1 (Table 3-3) Assumed Background Air Pollutant Concentrations. This table contains references to several air monitoring site data collected generally from 2002-2004. The Table units are presented as ug/m3, however, for some of the parameters it appears that ppb units may be shown instead. Please ensure units are correct. In addition, there are much more recent data available from 2006 and 2007 that should also be incorporated into the table.

   a. The background concentration for NO2 is listed for the Thunder Basin National Grassland Monitoring Site, which is located more than 20 miles north of Gillette. Please replace this location with the Antelope Site 3 NO2 monitoring data located near the Antelope II Coal Lease, which would be more representative of true background conditions.

   b. The background concentration for O3 is listed to be 70 ppb. The most recent data for the Thunder Basin National Grassland Monitoring Site is 0.069 ppm for a 3-year average 4^{th} max. Another WDEQ operated site located 15 miles SSW of Gillette measured 0.067 ppm for the 3-year average 4^{th} max.

   c. Data for SO2 should be updated to more recently measured concentrations at the Wyodak Site 4 monitoring station in Campbell County, Wyoming.

   d. It is unclear why data from Eagle Butte Mine was used for background PM_{10} in Table 3-3. There are numerous nearby PM_{10} monitoring sites in the southern PRB, including sites at the Antelope Mine, which are presented in Tables 3-4 and 3-5 of the DEIS. For NEPA purposes data presented as Background Data should be

data that represents base case ambient conditions near the proposed action.

5. 3.4.2.1 (Table 3-4) The table presents summary data from the Antelope mine PM10 monitoring sites. It is not clear why the 2nd maximum PM_{10} concentrations were presented. Typically, maximum PM_{10} 24-hour concentrations are presented. Please update the data to include 1st maximum concentrations. The Table should also include the 2006 and 2007 data.

    a. Table 3-5 Summary of PM_{10} for Wright Area Subregion should also include data from 2006 and 2007.

6. 4.2.3 (Page 4-33, 1st full paragraph) Current text indicates modeling shows that *the projected mine activities at the Antelope Mine will be in compliance with the PM_{10} ambient air standards for the life of mine.* It is not clear to EPA that this conclusion has been demonstrated in the DEIS. 3.4.2.2.1 (Page 3-29, 2nd full paragraph) references modeling analysis conducted to ensure compliance with the annual PM_{10} standard. Very little information is supplied in the DEIS on this project-specific analysis. A description of this modeling with assumptions and results should be made in the FEIS. A cumulative analysis was conducted for the DEIS as referenced from the PRB Coal Review analyses.

    a. Page 4-35 references the Memorandum of Agreement between the WDEQ and EPA (January 24, 1994). A condition of the agreement is to continue PM_{10} monitoring near the mine to ensure compliance with the 24-hour PM10 NAAQS. BLM should ensure that the mine operator consult with the WDEQ on any monitoring site adjustments or additions due to the proposed expansion of the active mine area. Particular attention should be made to shifting monitors closer to the active mine areas and the placement of air monitoring sites in order to determine maximum impacts from the proposed action.

7. We recommend that the DEIS disclose that emissions from coal combustion have been identified as a significant source of atmospheric mercury. EPA's web site at http://www.epa.gov/mercury/report.htm has several reports summarizing the environmental impacts of mercury, primarily bioaccumulation in the aquatic food web. Concentrations of mercury emitted as a result of combustion vary depending on the chemistry of coal deposits and the type of air pollution controls. For purposes of the DEIS, we recommend including any existing information on mercury emissions from power plants currently burning coal from the PRB mines.

Nitrogen Dioxide

8. 3.4.3.1.2 Mitigation for Nitrogen Dioxide Emissions. According to page 3-38, the Antelope Mine has already implemented voluntary measures to reduce NO2 emissions. Because the measures are voluntary, ACC may choose not to implement the mitigation

measures. It should also be noted that the measures for the mines do not include a prohibition of blasting when conditions are unfavorable (large blast, wet conditions, weather inversions, little wind, wind direction towards residences/road, etc.) The existing mitigation merely requires notification and monitoring. We recommend that a condition of approval be added to the lease prohibiting blasting when conditions are unfavorable. The mines would then need to analyze the size of blasts in conjunction with weather conditions and potential public exposure, to prevent exceedances of the EPA and NIOSH recommended toxicity levels. The FEIS also needs to more fully describe the types and levels of mitigation and how the mitigation will be implemented to reduce exposure to nitrogen dioxide. For example we understand that several of the mines have reduced the sizes of blasts, changed the composition of the material used for blasting, and/or changed the placements of blasting agents. Are these measures required or are they voluntary?

Cumulative Impacts

9. 4.2.3 Greenhouse Gas Emissions Impacts. EPA believes that BLM should include a discussion of greenhouse gases and climate change in the FEIS. Although there are currently no EPA regulatory standards directly limiting greenhouse gas emissions from burning Antelope Mine coal to produce power, there is enough information developed by the International Panel on Climate Change (IPCC) to inform a quantitative estimate of the GHG generated by the known coal-fired power plants burning this continuing supply of low sulfur compliance coal.[1]

10. We recommend that the impact sections for resources that are substantially impacted by cumulative impacts be reevaluated to determine how the impacts will overlap in time and for the resource as a whole. For example, does the timing of maximum impact from other activities (e.g., coalbed methane) coincide with the peak of impacts from coal mining? Are any resources impacted by coal mining approaching sustainability limits because of cumulative impact levels?

    This broader cumulative impact analysis should also factor in the success of reclamation/mitigation plans for various resources. Mining reclamation works well for restoring some aspects of resources such as grazing livestock and wildlife, and visual aesthetics. Other resource values may take a long time to return to a full function or may not be restorable at all (e.g., wetlands, groundwater, and unique habitats).

Wetlands

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[1] Since the issuance of the April 2, 2007 Supreme Court opinion in Massachusetts, et al. v. EPA, 127 S.Ct. 1438 (2007), EPA has been developing a response to the remand as well as evaluating the broader ramifications of the decision throughout the Clean Air Act (CAA). On March 27, 2008, the Administrator announced that he has directed his staff to draft an Advanced Notice of Proposed Rulemaking (ANPR) to discuss and solicit public input on the specific effects of climate change and the interrelated issues raised by the possible regulation of greenhouse gas emissions under the CAA. Thus, this comment letter does not reflect, and should not be construed as reflecting, the type of judgment that might form the basis for a positive or negative finding under any provision of the CAA.

11. 3.7.3 Wetlands Mitigation. The wetlands mitigation plan needs to be amended to compensate for the long-term loss of wetlands values during and following mining. The mitigation ratios may need to be increased to compensate for the temporal loss of wetlands. Wetlands obviously cease to function during the 10 to 20 years of mining. However, wetlands fed by groundwater will not regain function until the ground water table recovers. We recommend that additional mitigation be established to compensate for the long-term loss of wetland values. The mitigation plans for previous or current reclamation may provide good locations for increasing wetlands in the area. Alternatively, the mines may want to improve other wetlands damaged by over grazing, poorly constructed roads, or off-road vehicle damage.

Wildlife

12. 4.2.8.4 Special Status Species. The analysis for wildlife impacts should be based on the habitat needs of the species of concern, rather than the specific boundaries of the mines and lease tracts. There also needs to be sufficient analysis to understand the impacts of the LBA decisions. For example, on page 4-71, the DEIS states that no sage grouse leks occur within five miles of the West Antelope II LBA tract. It is unclear if the absence of nesting areas is important to the decline in sage grouse population or if there are sufficient numbers of leks nearby to sustain the population. In addition, this information does not appear to be consistent with the cumulative impacts discussion in the last paragraph of page H-67, which states that "Given the absence of grouse, and the limited quantity and marginal quality of potential grouse habitat in the area, USDA-FS Management Direction guidelines for Management Indicator Species (MIS) to not apply to this project." By looking at sage grouse habitat on a component-by-component basis and mainly on LBA and mining properties, the impacts of the LBA decisions are not apparent on the health and sustainability of the grouse population in this area. We note that a full biological assessment and evaluation document is being prepared for review in addition to the information in the EIS analysis.